

CLAIMS

1. A method for drying neotame with a co-agent to provide a solid neotame-containing product having improved uniformity and improved stability, said method comprising:

(1) dissolving the neotame in an organic solvent to form a neotame solution wherein the ratio of neotame to organic solvent is about 2:1 to about 1:10;

(2) dissolving the co-agent in water to form a co-agent solution wherein the ratio of co-agent to water is about 2:1 to about 1:2;

(3) combining the neotame solution and the co-agent solution to form a combined solution wherein the ratio of the neotame solution to the co-agent solution is about 1:10000 to about 1:3 and wherein the neotame and the co-agent are completely soluble in the combined solution; and

(4) spray drying the combined solution to obtain the solid neotame-containing product;

wherein the solid neotame-containing product contains less than about 7 percent moisture, less than about 25 percent neotame, and has improved uniformity and stability.

2. The method of claim 1, wherein the co-agent solution is subjected to pasteurization conditions and then cooled to below about 100°F prior to step (3).

3. The method of claim 1, wherein the organic solvent is selected from the group consisting of methanol, ethanol, ethylene glycol, propylene glycol, glycerin, ethyl acetate, triacetin, and mixtures thereof and wherein the co-agent is selected from the group consisting of hydrolyzed starch materials, starches, lactose, dextrose, maltodextrin, dextrose with maltodextrin, polydextrose, sugar alcohols, hydroxypropylmethylcellulose, edible organic acids, gums, and mixtures thereof.

4. The method of claim 2, wherein the organic solvent is selected from the group consisting of methanol, ethanol, ethylene glycol, propylene glycol, glycerin, ethyl acetate, triacetin, and mixtures thereof and wherein the co-agent is selected from the group consisting of hydrolyzed starch materials, starches, lactose, dextrose, maltodextrin, dextrose with maltodextrin, polydextrose, sugar alcohols, hydroxypropylmethylcellulose, edible organic acids, gums, and mixtures thereof.

5. The method of claim 1, wherein the organic solvent is ethanol and co-agent is maltodextrin.

6. The method of claim 2, wherein the organic solvent is ethanol and the co-agent is maltodextrin.

7. The method of claim 1, wherein the moisture and the average particle size of the solid neotame-containing product is about 1 to 5 percent and about 50 to about 150 microns, respectively.

8. The method of claim 2, wherein the moisture and the average particle size of the solid neotame-containing product is about 1 to 5 percent and about 50 to about 150 microns, respectively.

9. A method for drying neotame with a co-agent to provide a solid neotame-containing product having improved uniformity and improved stability, said method comprising:

(1) dissolving the neotame in an organic solvent to form a neotame solution wherein the ratio of neotame to organic solvent is about 2:1 to about 1:10 and wherein the neotame is completely soluble in the organic solvent;

(2) dissolving the co-agent in water to form a co-agent solution wherein the ratio of co-agent to water is about 2:1 to about 1:2 and wherein the co-agent is completely soluble in the water;

(3) combining the neotame solution and the co-agent solution to form a combined solution wherein the ratio of the neotame solution to the co-agent solution is about 1:10000 to about 1:3 and wherein the neotame and the co-agent are completely soluble in the combined solution; and

(4) spray drying the combined solution to obtain the solid neotame-containing product;

wherein the solid neotame-containing product contains less than about 7 percent moisture, less than about 25 percent neotame, and has improved uniformity and stability.

10. The method of claim 9, wherein the co-agent solution is subjected to pasteurization conditions and then cooled to below about 100°F prior to step (3).

11. The method of claim 9, wherein the organic solvent is selected from the group consisting of methanol, ethanol, ethylene glycol, propylene glycol, glycerin, ethyl acetate, triacetin, and mixtures thereof and wherein the co-agent is selected from the group consisting of hydrolyzed starch materials, starches, lactose, dextrose, maltodextrin, dextrose with maltodextrin, polydextrose, sugar alcohols, hydroxypropylmethylcellulose, edible organic acids, gums, and mixtures thereof.

12. The method of claim 10, wherein the organic solvent is selected from the group consisting of methanol, ethanol, ethylene glycol, propylene glycol, glycerin, ethyl acetate, triacetin, and mixtures thereof and wherein the co-agent is selected from the group consisting of hydrolyzed starch materials, starches, lactose, dextrose, maltodextrin, dextrose with maltodextrin, polydextrose, sugar alcohols, hydroxypropylmethylcellulose, edible organic acids, gums, and mixtures thereof.

13. The method of claim 9, wherein the organic solvent is ethanol and co-agent is maltodextrin.

14. The method of claim 10, wherein the organic solvent is ethanol and the co-agent is maltodextrin.

15. The method of claim 13, wherein the moisture and the average particle size of the solid neotame-containing product is about 3 to 5 percent and about 50 to about 150 microns, respectively.

16. The method of claim 14, wherein the moisture and the average particle size of the solid neotame-containing product is about 3 to 5 percent and about 50 to about 150 microns, respectively.

17. A method for drying neotame with a co-agent to provide a solid neotame-containing product having improved uniformity and improved stability, said method comprising

(1) dissolving the neotame in an organic solvent to form a neotame solution wherein the ratio of neotame to organic solvent is about 3:1 to about 2:1 and wherein the neotame is completely soluble in the organic solvent;

(2) dissolving the co-agent in water to form a co-agent solution wherein the ratio of co-agent to water is about 2:1 to about 1:2 and wherein the co-agent is completely soluble in the water;

(3) pasteurizing the co-agent solution;

(4) cooling the pasteurized co-agent solution to below about 110°F;

(5) combining the neotame solution and the cooled pasturized co-agent solution to form a combined solution wherein the ratio of the neotame solution to the co-agent solution is about 1:10000 to about 1:3 and wherein the neotame and the co-agent are completely soluble in the combined solution; and

(6) spray drying the combined solution to obtain the solid neotame-containing product;

wherein the solid neotame-containing product contains less than about 7 percent moisture, less than about 25 percent neotame, and has improved uniformity and stability.

18. The method of claim 17, wherein the organic solvent is selected from the group consisting of methanol, ethanol, ethylene glycol propylene glycol, glycerin, ethyl acetate, triacetin, and mixtures thereof and wherein the co-agent is selected from the group consisting of hydrolyzed starch materials, starches, lactose, dextrose, maltodextrin, dextrose with maltodextrin, polydextrose, sugar alcohols, hydroxypropylmethylcellulose, edible organic acids, gums, and mixtures thereof.

19. The method of claim 17, wherein the organic solvent is ethanol and co-agent is maltodextrin.

20. The method of claim 18, wherein the moisture and the average particle size of the solid neotame-containing product is about 1 to 5 percent and about 25 to about 500 microns, respectively.

21. The method of claim 19, wherein the moisture and the average particle size of the solid neotame-containing product is about 1 to 5 percent and about 25 to about 500 microns, respectively.

22. The method of claim 20, wherein the moisture and the average particle size of the solid neotame-containing product is about 3 to 5 percent and about 50 to about 150 microns, respectively.

23. The method of claim 21, wherein the moisture and the average particle size of the solid neotame-containing product is about 3 to 5 percent and about 50 to about 150 microns, respectively.

24. A solid neotame-containing product having improved uniformity and improved stability, wherein the solid neotame-containing product is prepared by a method comprising

(1) dissolving the neotame in an organic solvent to form a neotame solution wherein the ratio of neotame to organic solvent is about 3:1 to about 2:1;

(2) dissolving the co-agent in water to form a co-agent solution wherein the ratio of co-agent to water is about 2:1 to about 1:2;

(3) combining the neotame solution and the co-agent solution to form a combined solution wherein the ratio of the neotame solution to the co-agent solution is about 1:10000 to about 1:3 and wherein the neotame and the co-agent are completely soluble in the combined solution; and

(4) spray drying the combined solution to obtain the solid neotame-containing product;

wherein the solid neotame-containing product contains less than about 7 percent moisture, less than about 25 percent neotame, and has improved uniformity and stability.

25. The solid neotame-containing product of claim 24, wherein the neotame is completely soluble in the organic solvent in step (1) and wherein the co-agent is completely soluble in the water in step (2).

26. The solid neotame-containing product of claim 25, wherein the co-agent solution is subjected to pasteurization conditions and then cooled to below about 100°F prior to step (3).

27. The solid neotame-containing product of claim 24, wherein the organic solvent is selected from the group consisting of methanol, ethanol, ethylene glycol, propylene glycol, glycerin, ethyl acetate, triacetin, and mixtures thereof and wherein the co-agent is selected from the group consisting of hydrolyzed starch materials, starches, lactose, dextrose, maltodextrin, dextrose with maltodextrin, polydextrose, sugar alcohols, hydroxypropylmethylcellulose, edible organic acids, gums, and mixtures thereof.

28. The solid neotame-containing product of claim 25, wherein the organic solvent is selected from the group consisting of methanol, ethanol, ethylene glycol, propylene glycol, glycerin, ethyl acetate, triacetin, and mixtures thereof and wherein the co-agent is selected from the group consisting of hydrolyzed starch materials, starches, lactose, dextrose, maltodextrin, dextrose with maltodextrin, polydextrose, sugar alcohols, hydroxypropylmethylcellulose, edible organic acids, gums, and mixtures thereof.

29. The solid neotame-containing product of claim 26, wherein the organic solvent is selected from the group consisting of methanol, ethanol, ethylene glycol, propylene glycol, glycerin, ethyl acetate, triacetin, and mixtures thereof and wherein the co-agent is selected from the group consisting of hydrolyzed starch materials, starches, lactose, dextrose, maltodextrin, dextrose with maltodextrin, polydextrose, sugar alcohols, hydroxypropylmethylcellulose, edible organic acids, gums, and mixtures thereof.

30. The solid neotame-containing product of claim 24, wherein the organic solvent is ethanol and co-agent is maltodextrin.

31. The solid neotame-containing product of claim 25, wherein the organic solvent is ethanol and the co-agent is maltodextrin.

32. The solid neotame-containing product of claim 26, wherein the organic solvent is ethanol and the co-agent is maltodextrin.

33. The solid neotame-containing product of claim 24, wherein the moisture and the average particle size of the solid neotame-containing product is about 1 to 5 percent and about 25 to about 500 microns, respectively.

34. The solid neotame-containing product of claim 25, wherein the moisture and the average particle size of the solid neotame-containing product is about 1 to 5 percent and about 25 to about 500 microns, respectively.

35. The solid neotame-containing product of claim 26, wherein the moisture and the average particle size of the solid neotame-containing product is about 1 to 5 percent and about 25 to about 500 microns, respectively.

36. The solid neotame-containing product of claim 33, wherein the moisture and the average particle size of the solid neotame-containing product is about 3 to 5 percent and about 50 to about 150 microns, respectively.

37. The solid neotame-containing product of claim 34, wherein the moisture and the average particle size of the solid neotame-containing product is about 3 to 5 percent and about 50 to about 150 microns, respectively.

38. The solid neotame-containing product of claim 35, wherein the moisture and the average particle size of the solid neotame-containing product is about 3 to 5 percent and about 50 to about 150 microns, respectively.